

# GBU3006HS THRU GBU3012HS

## 30A, 600V to 1200V

### Single Phase Glass Passivated Bridge Rectifiers

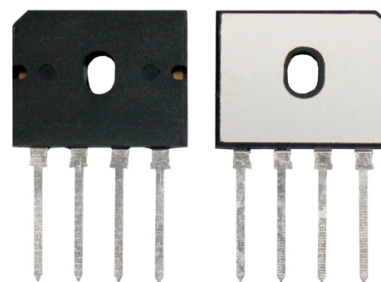
#### FEATURES

- Glass passivated chip junction
- High surge current capability
- Low reverse leakage current
- High temperature soldering guaranteed: 270°C±5°C/10 seconds
- RoHS compliant

#### MECHANICAL DATA

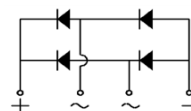
- Case: GBUHS
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case

#### GBUHS



RoHS  
COMPLIANT

HALOGEN  
FREE  
AVAILABLE



#### TYPICAL APPLICATION

General purpose use in Household electric appliances, industrial power supply, industrial automation equipment, Electric welding machine, etc.

#### MAXIMUM RATINGS

T<sub>A</sub>=25°C unless otherwise noted

| Parameter   | Symbol             | GBU 3006HS  | GBU 3008HS | GBU 3010HS | GBU 3012HS | Unit             |
|---|--------------------|-------------|------------|------------|------------|------------------|
| Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>   | 600         | 800        | 1000       | 1200       | V                |
| Average Forward Rectified Current<br>(With heatsink, T <sub>C</sub> =100°C)           | I <sub>F(AV)</sub> | 30          |            |            |            | A                |
| Peak Forward Surge Current<br>(10ms single half sine-wave superimposed on rated load) | I <sub>FSM</sub>   | 350         |            |            |            | A                |
| Rating for Fusing<br>(1ms<t<8.3ms, T <sub>J</sub> =25°C, Rating of per diode)         | I <sup>2</sup> t   | 508         |            |            |            | A <sup>2</sup> s |
| Operating Junction Temperature Range  | T <sub>J</sub>     | -55 to +150 |            |            |            | °C               |
| Storage Temperature Range   | T <sub>STG</sub>   | -55 to +150 |            |            |            | °C               |

#### ELECTRICAL CHARACTERISTICS

T<sub>A</sub>=25°C unless otherwise noted

| Parameter  | Test Conditions       | Symbol           | Value | Unit |
|--|-----------------------|------------------|-------|------|
| Peak Forward Voltage@I <sub>F</sub> =15A<br>(Pulse measurement, Rate of per diode)         |                       | V <sub>F</sub>   | 1.05  | V    |
| Reverse Current@V <sub>R</sub> =V <sub>RRM</sub><br>(Pulse measurement, Rate of per diode) | T <sub>J</sub> =25°C  | I <sub>R</sub>   | 5     | µA   |
|  | T <sub>J</sub> =125°C |                  | 350   |      |
| Typical Thermal Resistance   | without heatsink      | R <sub>θJA</sub> | 20    | °C/W |
|  | with heatsink         | R <sub>θJC</sub> | 0.85  |      |

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#### RATINGS AND CHARACTERISTICS CURVES

FIG.1 Derating Curve For Output Rectified Current

FIG.2 Maximum Non-Repetitive Peak Forward Surge Current

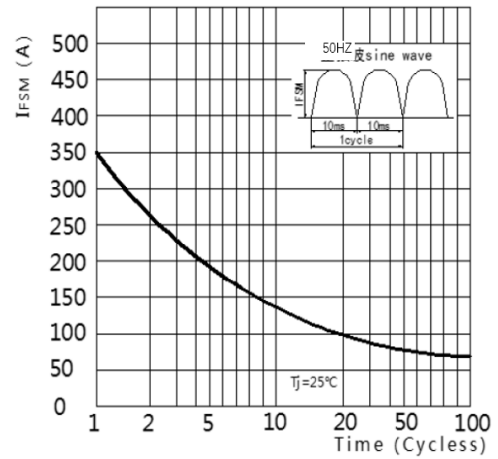
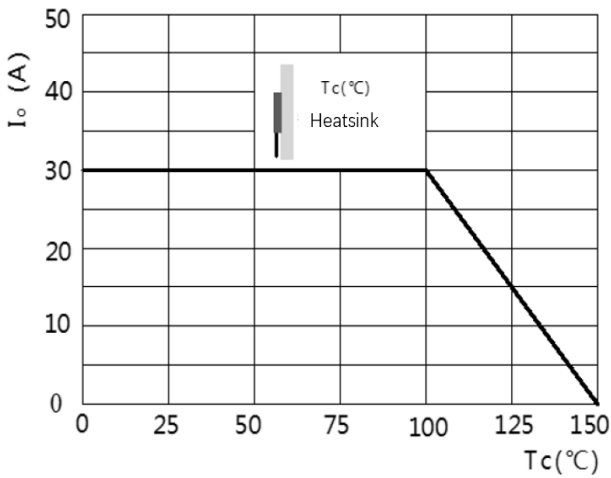
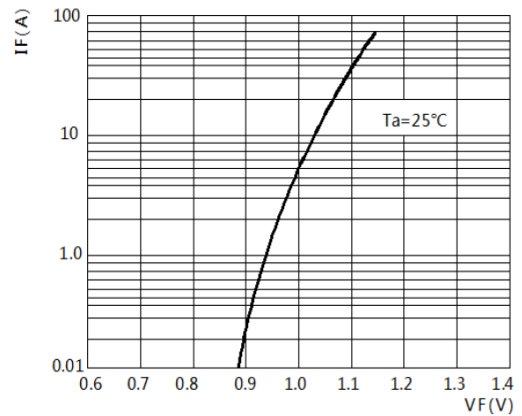
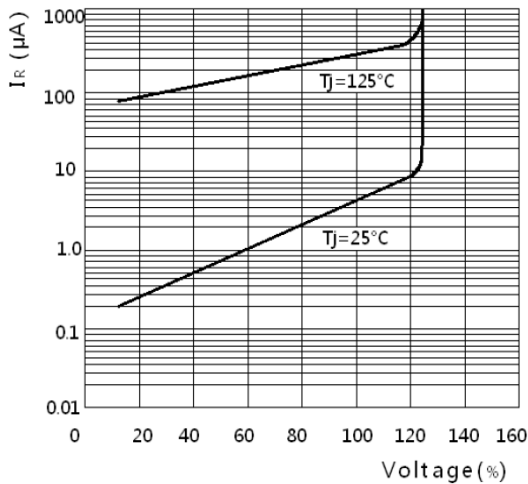


FIG.3 Typical Reverse Characteristics

FIG.4 Typical Forward Characteristics

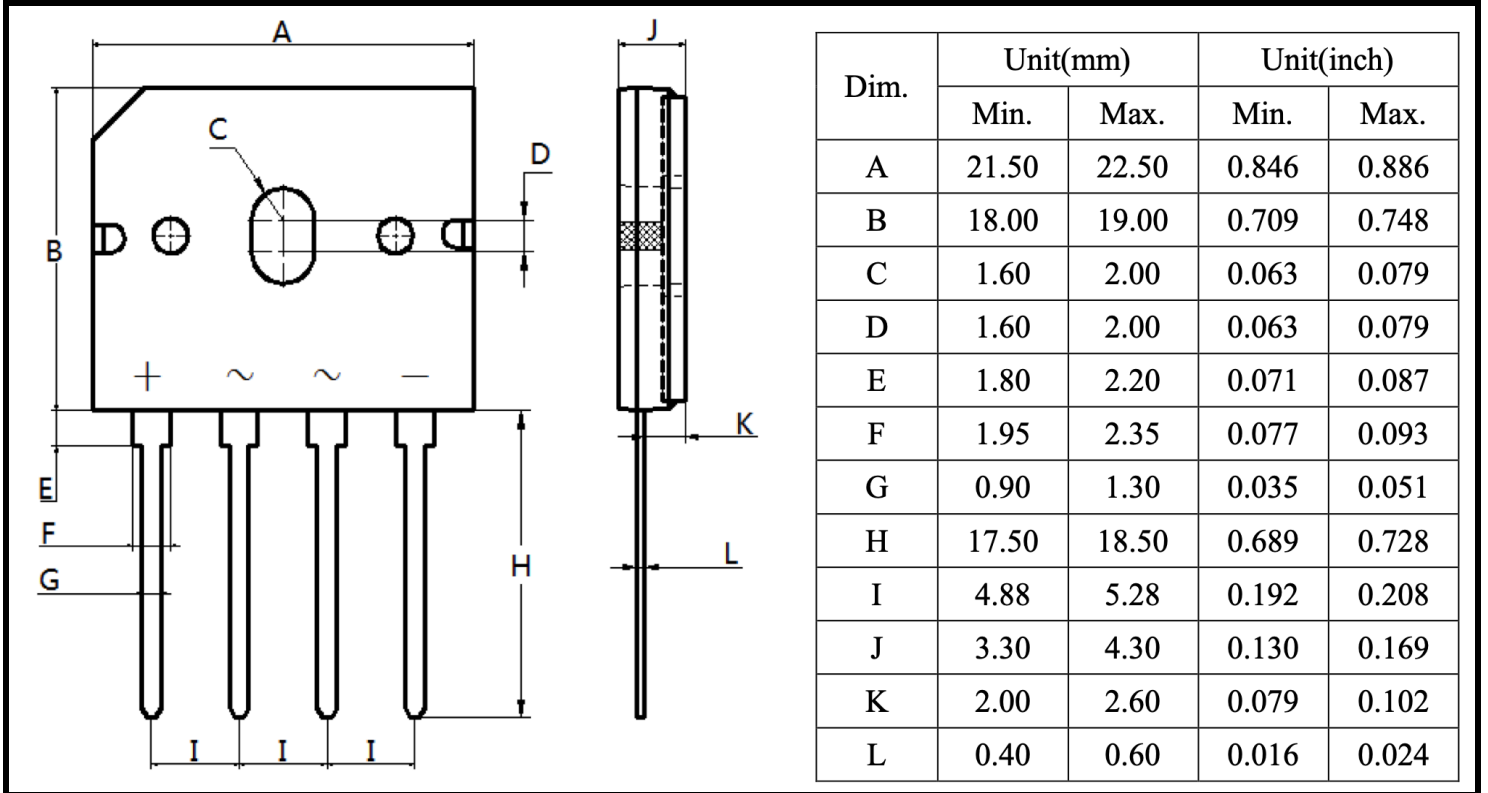


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#### PACKAGE OUTLINE DIMENSIONS



#### PACKING INFORMATION

| Package | Inner Box (PCS) | Carton (PCS) |
|---------|-----------------|--------------|
| GBUHS   | 250             | 3,000        |